WATER RECYCLING FUNDING GUIDELINES

April 17, 1997

California State Water Resources Control Board
Office of Water Recycling

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PART ONE: BACKGROUND INFORMATION

I. INTRODUCTION

The State Water Resources Control Board (SWRCB) has three programs to provide financial assistance to local agencies for water recycling projects. The purpose of these guidelines is to explain the types of assistance available under each program and describe the procedures and funding criteria for applicants to obtain funds. Definitions of terms and abbreviations used in these guidelines are provided in Appendices A and B.

Grant funding assistance is available for water recycling project planning under the Water Recycling Facilities Planning Grant Program (FPGP). In addition, low interest loans are also available for planning under the State Revolving Fund (SRF). Low interest loan funds are available for design and construction of water recycling projects under the Water Recycling Loan Program (WRLP) or the SRF. The guidelines are presented in three parts. The first part includes background information applicable to all funding programs. A description of the FPGP is provided in the second part. Part Three has descriptions of the WRLP and SRF loan assistance programs.

These guidelines apply to all projects that have not received a preliminary grant or loan commitment from the SWRCB as of April 17, 1997. The provisions of these guidelines dealing with mandatory use ordinances for recycled water market assurances do not apply to agencies where their ordinances have received

[a] These guidelines were adopted by the State Water Resources Control Board on April 17, 1997.

approval for the current loan application prior to June 16, 1994.

Funding for the WRLP is provided by three bond laws described below. The basis for the FPGP is the Safe, Clean, Reliable Water Supply Act (1996 Bond Law). The SRF is funded by federal grants and various state and local sources. These guidelines are also applicable to the SRF for all water recycling projects except those justified only on the basis of meeting pollution control needs (classified as Category II recycling projects later in these guidelines). In addition to these water recycling guidelines, the "Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities" (SRF Policy) also applies to agencies applying for an SRF loan. Because of some differences in the laws and policies governing the WRLP and SRF, an SRF applicant should refer to "State Revolving Fund Loan Program Funding for Water Recycling Projects." (Refer to Appendix E to obtain other SWRCB publications related to these programs.)

A. Clean Water Bond Law of 1984

A Water Reclamation Account was established under the Clean Water Bond Law of 1984 (1984 Bond Law) which authorized up to $25 million for low-interest loans to municipalities to assist in the design and construction of water recycling projects. Repayments of principal and interest are returned to the Water Reclamation Account to make additional loans. Also, the first $30 million in principal and interest repaid for loans for wastewater facilities from the Clean Water Construction Grant Account, provided for in the 1984 Bond Law, will be deposited in the Water Reclamation Account. Loans for water recycling projects can be for a period of up to 25 years at an interest rate equal to 50 percent of the rate paid by the State on the most recent sale of state general obligation bonds. A moratorium on payments of principal and interest is not permitted. No single project may receive more than a $10 million loan from this program. Loans can cover any part of a project up to 100 percent of eligible project design and construction costs.

B. Clean Water and Water Reclamation Bond Law of 1988

Up to $30 million was initially available under the Clean Water and Water Reclamation Bond Law of 1988 (1988 Bond Law) for low-interest loans to local public agencies to aid in the design and construction of water recycling projects. In addition, the SWRCB exercised authority under the 1988 Bond Law to transfer an additional $10 million into the Water Reclamation Account. "Local public agencies" do not include state agencies, which are included in the 1984 Bond Law as part of "municipalities". Loan repayments from these funds do not become part of a

revolving fund as is the case of the 1984 Bond Law. The loan provisions are the same as for the 1984 Bond Law with the exceptions that the maximum loan period is 20 years instead of 25 years, no maximum loan amount per project is specified, and state agencies cannot receive loans.

C. Safe, Clean, Reliable Water Supply Act of 1996

A Water Recycling Subaccount was established in the Safe, Clean, Reliable Water Supply Act (1996 Bond Law) for low-interest loans for design and construction of water recycling projects and for grants for facilities planning of recycling projects. Loans for water recycling projects can be for a period of up to 20 years at an interest rate equal to 50 percent of the rate paid by the State on the most recent sale of state general obligation bonds. A moratorium on payments of principal and interest is not permitted. Loans may cover up to 100 percent of eligible project design and construction costs. Loan repayments are returned to the subaccount to make additional loans. Grants are limited to $75,000 per planning study.

D. State Revolving Fund

The State Revolving Fund Loan Program provides low interest loans for planning, design, and construction of collection, treatment, disposal and recycling of municipal wastewater, for implementation of nonpoint source and storm drainage pollution control management programs, and for the development and implementation of estuary conservation and management programs. SRF loan provisions are similar to those in the bond laws described above for the WRLP. A detailed description of SRF provisions is provided in the SRF Policy.

E. Water Recycling Project Categories

There are four sources of funding under two programs for providing loans for the design and construction of water recycling projects. Because each funding source has its own legal constraints and primary objectives, it is necessary to define four categories of water recycling projects. The categories and their funding sources are described below.

1. Category I. New Water Supply: A cost-effective alternative for augmenting the state water supply by offsetting new freshwater development by reclaiming municipal wastewater. Generally, this category would involve wastewater that is discharged into marine or brackish waters. The recycled water users served must be water users that were using or would have used fresh water without the availability of

recycled water. Category I projects with an eligible cost of less than $15 million will be funded by the WRLP. SRF funds will be available if the eligible cost exceeds either the funds available in the WRLP or $15 million.

2. Category II. Pollution Control: An essential component of the cost-effective alternative for the treatment and disposal of municipal wastewater to meet waste discharge requirements imposed for water pollution control. Category II projects will be funded only by the SRF.

3. Category III. Local Water Supply: A cost-effective alternative that would augment a local water supply by reclaiming municipal wastewater but that may not augment the state's water supply. Development of a local recycled water supply for one area can reduce the availability of recycled water already being used in another area. A project in Category III must not result in a net decrease in the state's water supply. The recycled water users served must be water users that were using or would have used fresh water without the availability of recycled water. Generally, this category would involve wastewater that is being discharged into fresh water or a usable groundwater basin and is being reused indirectly. Category III projects will be funded only by the WRLP with 1996 Bond Law funds.

4. Category IV. Miscellaneous: Any water recycling project not included in the other categories. The source of water that is recycled may be municipal wastewater or groundwater that has become polluted primarily because of human activities. The project must be cost-effective based on the project objective. Category IV projects will be funded by the WRLP with 1984 or 1996 Bond Law funds or by the SRF, depending on a case-by-case evaluation of eligibility under the specific funding source.

F. Further Information and Assistance

To apply for a recycling planning grant or construction loan, complete an application form and submit it and supporting documents to the Office of Water Recycling (OWR) of the SWRCB.

Additional information can be secured by use of the order form in Appendix E. The OWR is available to answer questions and advise the applicant during the planning process. An agency anticipating a possibility of seeking a loan in the future is encouraged to contact OWR early in the planning to ensure that the scope and content of planning will cover the key issues necessary for loan approval. Advice on which category a project would fall in can be provided. The OWR can be

contacted by writing to

Office of Water Recycling
State Water Resources Control Board
P. O. Box 944212
Sacramento, California 94244-2120

This office can also be contacted by telephone at (916) 227-4580 or 227-4400 or by Fax at (916) 227-4595.

II. FACILITIES PLANNING CONCEPTS

The planning process generally comprises three levels of detail--conceptual, feasibility, and facilities. At the conceptual level, a potential project is sketched out, rough costs are estimated, and a potential recycled water market is identified. At this level little investigation has occurred and information is generally preliminary in nature.

At the feasibility level, a preliminary market assessment is performed, including direct consultation with potential recycled water users. Alternative facilities are screened, considering economics, technical constraints, and other factors. The most promising project is then investigated sufficiently to determine whether it is appropriate to proceed to the facilities planning stage.

The facilities planning level represents the final stage of the planning process. Agencies are expected to complete this stage of the planning process at the conclusion of a planning grant or before filing a loan application. At the facilities planning stage, a thorough cost-effectiveness analysis is conducted for all potential alternatives. Such an analysis includes evaluation of economics, environmental and social factors, and technical feasibility. Environmental, technical, and institutional issues are identified and potential obstacles are resolved. All necessary facilities of the recommended project have been identified, and the project is described with sufficient detail to seek funding and approvals by regulatory agencies. Potential recycled water users have been informed of the conditions for using recycled water, including probable price. A detailed market assessment is performed, and a construction financing plan and revenue program are developed. Agencies initiate formal discussions with suppliers, wholesalers, retailers, and users of the recycled water, and institutional arrangements are decided upon. Market assurances, such as mandatory use ordinances or letters of intent from users, are obtained.

As part of the planning process the agency must conduct an environmental review. Environmental review should be consistent with requirements for obtaining SRF funding from the SWRCB. Guidance is provided in "Environmental Review Process Guidelines for State Loan and Small Community Grant Applicants." It will also be necessary to obtain clearance from the SWRCB's Division of Water Rights regarding compliance with Water Code Section 1211, if the proposed water recycling project will modify a current wastewater discharge to a surface water course by changing the point of discharge, place of use, or purpose of use of the treated wastewater. Because of the time involved in state water rights review, the Petition Unit of Division of Water Rights should be contacted early in the planning process. The SWRCB will not authorize a loan commitment until water recycling requirements have been issued by the Regional Water Quality Control Board (RWQCB).

The completed facilities planning should be documented in a report, which is to be submitted in fulfillment of a planning grant or with a loan application form. The information that should be contained in a facilities planning report is shown in Appendix C. Monetary analyses, market assessment, and market assurances are described in the following sections and Appendix D.

A. Monetary Analyses

An important factor in the cost-effectiveness analysis of water recycling is an analysis of monetary costs and benefits. Monetary costs and benefits can be analyzed in different ways depending on the use of the results. In water resources planning two general categories of monetary analyses have been established: economic analysis and financial analysis. The purpose of the economic analysis is to determine whether a project alternative is justified by quantifying all monetary costs and benefits regardless of who pays the costs or receives the benefits. The intent is to determine the alternative of least net cost. The economic analysis does not have the viewpoint of any particular public agency or private entity. A financial analysis is intended to determine who pays the costs and receives the benefits and to determine financial feasibility. This analysis should indicate costs and benefits to the recycled water user, the taxpayer, and the water retailer or wholesaler, and the sources of funds to implement the project alternatives being evaluated. A detailed discussion of monetary analyses can be found in Interim Guidelines for Economic and Financial Analyses of Water Projects (see Appendix F to order this).

1. Economic Analysis

The first step in an economic analysis is to identify all items of increased or decreased cost as a result of each alternative under consideration, including continuing without a project. The economic analysis should include the costs of all future components necessary to obtain the estimated recycled water yield for a project. If a proposed project or loan application is for system component that in itself would be insufficient to produce and transport recycled water to potential users, the costs for all associated facilities should be estimated. Costs experienced by entities other than the project sponsor must also be identified. For example, recycled water users may incur additional costs to convert to recycled water or may incur savings in fertilizer use because of nutrients in recycled water. If indirect reuse is taking place downstream from an effluent discharge, diversion of the effluent for direct reuse may result in increased water supply costs downstream.

The basis of comparison for justifying a water recycling project will depend on which category applies to the project. Some general principles apply to the analysis regardless of category. All monetary values are expressed in current dollars, excluding inflation. Because the debt service or fixed operating costs of existing facilities would not be reduced by use of recycled water, these costs are not included in the economic analysis. In an economic analysis, the present value of all immediate and future cost increases and decreases is calculated, including those experienced by other entities. The present values should be computed using a discount rate (a type of interest rate) specified by the SWRCB. To be able to compare the net cost of recycling alternatives and proposed water supply developments on a common basis, dollars per acre-foot of water developed should be computed. A water recycling alternative is considered economically justified if its net cost is less than the least net cost of other alternatives to achieve the same project objective.

Category I: For Category I the basis of comparison for justifying a water recycling project is a new freshwater supply that will be needed to serve the area of the recycled water project. The appropriate freshwater alternative for comparison is established in the facilities planning report in which the freshwater needs are projected and available facilities are discussed. The costs for use in the economic analysis of the new freshwater supply consist primarily of the capital and operation and maintenance costs of the new freshwater facilities and the variable costs of operating any existing water facilities that are needed in conjunction with the new facilities to deliver the new supply to the same market area as

of the recycled water.

Category II: The basis of comparison for Category II projects is the least cost alternative pollution control project that would be needed to meet

Regional Water Quality Control Board waste discharge requirements for the protection of receiving waters.

Category III: The basis of comparison for Category III projects is existing or new freshwater supplies, analyzed similarly to Category I projects. If the effect of recycling would be to reduce the water supply to another agency, the economic effects of this must be included in the analysis.

Category IV: The factors to include in economic analyses will be determined on a case-by-case basis because the basis of Category IV projects may include objectives that do not include water supply, such as environmental enhancement. In general terms the economic analysis will include a comparison with appropriate alternatives to achieve the same project objectives. The economic effects of reduced water supply to another agency must be included, if appropriate.

2. Financial Analysis

The financial analysis actually consists of several analyses. An agency developing a water recycling project must determine the costs and savings it will experience for each potential alternative to determine whether an alternative is financially feasible. It must identify sources of funds to finance proposed alternatives. The construction financing plan and revenue program demonstrate the basic financial feasibility from the perspective of the agency. These are described in Appendix D.

Important information for the recycled water users is the cost or savings they will experience. Recycled water prices must be compared to the cost of fresh water that the users would otherwise use. The costs of on-site conversion to recycled water use must be estimated. Savings in fertilizer use should be considered.

In performing financial analyses, it is appropriate to use inflated dollars for future costs and to use an interest rate in present value analyses that is based on an agency's borrowing cost.

B. Recycled Water Market Assessment

The completion of a detailed recycled water market assessment is a critical element of the facilities planning process and crucial to the success of any water recycling project. A market assessment involves the identification of potential recycled water users, collection of information related to the users, and evaluation of the suitability of the recycled water

to serve the potential market. Information is needed about and from the users to determine design criteria for a recycled water system, a recycled water pricing policy, financial feasibility, the amount and source of fresh water displaced, the institutional framework for the project, and the capability and willingness of users to take recycled water. The suitability of the recycled water is governed both by health and water pollution concerns and by the water quality needs of the users. Costs are a key element in bringing together recycled water and the potential water market. The general expectations of users is that the conditions of recycled water service will be comparable to alternative freshwater supplies, particularly for users already accustomed to taking potable water.

The recycled water market assessment process generally includes two levels of detail--preliminary and detailed. Agencies typically perform a preliminary market assessment during the feasibility planning stage. The preliminary market assessment is developed through consultation with users and provides general data, such as the number of potential users, and the amount and type of potential recycled water use. While this information is adequate to allow an agency to determine whether a project warrants further consideration, additional information is necessary to determine the economic and financial feasibility of the project.

Agencies are required to conduct a detailed market assessment as part of the facilities planning process. The market assessment shall include, as a minimum, all of the users or service area for the capacity of the facilities for which loan funding is or may be requested. Like the preliminary market assessment, the detailed market assessment must be developed through direct consultation with potential users. The following information should be included in the detailed market assessment:

A. General Information

1. List and map of potential users in the study area and types of uses.

2. State and local health department recycled water quality requirements and delivery requirements (backflow prevention, irrigation methods, levels of treatment, etc.) for each type of use.

3. Regional Water Quality Control Board recycled water quality and delivery requirements for each type of use and any restrictions in certain geographical

areas for protection of ground water or surface water.

4. An estimate of the probable water quality of recycled water that could be made available in the future and a comparison of this quality to the health and water quality requirements of potential users.

5. An estimate of future freshwater supply costs to users.

6. An estimate of costs for facilities or modifications needed on user sites to accept recycled water for each type of user site.

B. Individual User Information

1. Specific potential uses of recycled water.

2. Location of user.

3. Present and future quantity needs. (For existing water users, present water use should be documented with three previous years of water usage.)

4. Timing of needs (seasonal, daily, hourly demands).

5. Quality needs.

6. Reliability needs regarding availability and quality of recycled water.

7. Needs regarding disposal of used recycled water.

8. Internal capital investment for on-site treatment or plumbing retrofit needed to accept recycled water (also gather data to develop an independent estimate to compare with user's estimate). (This item is required for planning grant recipients only.)

9. Needed savings on recycled water to recover on-site costs or desired pay-back period and rate of return on investment. (This item is required for planning grant recipients only.)

10. Present source of water, present water retailer, cost of present source of water.

11. When user would be prepared to begin using recycled

water.

12. Future land use trends that could eliminate recycled water use, such as conversion of farm lands to urban development.

13. For undeveloped future potential sites, the year in which water demand is expected to begin, current status and schedule of development (with supporting evidence, such as subdivision maps, land use permits, general plan land use designations, irrigated acreages, etc.).

14. Evidence that the prospective user was informed of a potential water recycling project, was asked for a preliminary impression of willingness to use recycled water, and what response the prospective user gave regarding willingness. This evidence may be presented in the forms of a table with a list of users, correspondence from users, or some other record of user response. Users should be informed of applicable health and RWQCB restrictions, potential recycled water quality available depending on treatment level, future cost, and quality of fresh water. (This item is required for planning grant recipients only.)

15. The data listed above may be grouped into categories for numerous small users of similar characteristics. However, please consult with OWR before doing so.

Determination of the market for recycled water in future development depends upon various sources of information of varying reliability. For near-term development that is proposed for inclusion in the ninth-year eligible capacity, information will generally be expected directly from land developers of their intentions, following the model format available from the Office of Water Recycling. This information shall be submitted for review before facilities plan approval is issued. Undeveloped sites may be included as part of the first year delivery commitment if the development has proceeded sufficiently through design and received sufficient approvals and permits that the SWRCB can safely assume that the user will be ready to accept recycled water upon completion of construction of the recycling project.

The preparation of the market assessment should not be viewed as a data collection exercise, but as an integral step in the recycled water marketing process. Potential customers should be familiarized with details of the proposed project, including the proposed project schedule, the projected water quality and reliability, and the projected price of recycled water in comparison with alternative water supplies (if such water supplies would be available to the customer). An agency that has adopted a mandatory use ordinance should also provide information about the ordinance and the customer's responsibility under the ordinance. Evidence of this effort to inform potential users (e.g., a copy of the information package provided to potential users) should be included in the detailed market assessment. The detailed market assessment should be documented in the facilities planning report.

C. Market Assurances

Reclaimed water market assurances serve to ensure that the water produced by a project will be utilized within the time frame envisioned in the facilities planning documents. Market assurances take the forms of 1) binding measures to ensure the participation of recycled water users upon initial project operation and 2) the agency’s plans for connecting additional users later to fulfill the entire eligible capacity of the project. The binding measures for securing the initial recycled water users generally take two forms: 1) mandatory use ordinances in which potential users are mandated to participate in the project or 2) user contracts in which potential users voluntarily commit themselves to participate in the project. The two forms of assurances are described in Section IX in Part

Three. Which approach to take should be evaluated during facilities planning.

III. WATER RECYCLING FACILITIES PLANNING GRANT PROGRAM

A. Introduction

The Water Recycling Facilities Planning Grant Program (FPGP) provides grants to public agencies for facilities planning studies for water recycling. The program is administered by the Office of Water Recycling (OWR) of the SWRCB. The grant program's statutory requirements, policies and procedures are provided in this section.

B. Purpose

The purpose of the FPGP is to assist local agencies in the preparation of facilities planning studies for water recycling using treated municipal wastewater. In addition to encouraging new recycling planning studies, the SWRCB intends that these funds be used to supplement local funds to enhance the quality of local planning efforts and to produce documents needed by the SWRCB to evaluate applications for design and construction loans if a cost-effective project is identified.

C. General Guidelines

Public agencies may apply for the grants. Grants will be provided for facilities plans to determine the feasibility of using recycled water that will offset new freshwater development and augment the state's or a local water supply. Pollution control studies, in which water recycling is an alternative, will not be eligible for a grant. The grant will cover 50 percent of eligible costs up to a maximum grant of $75,000.

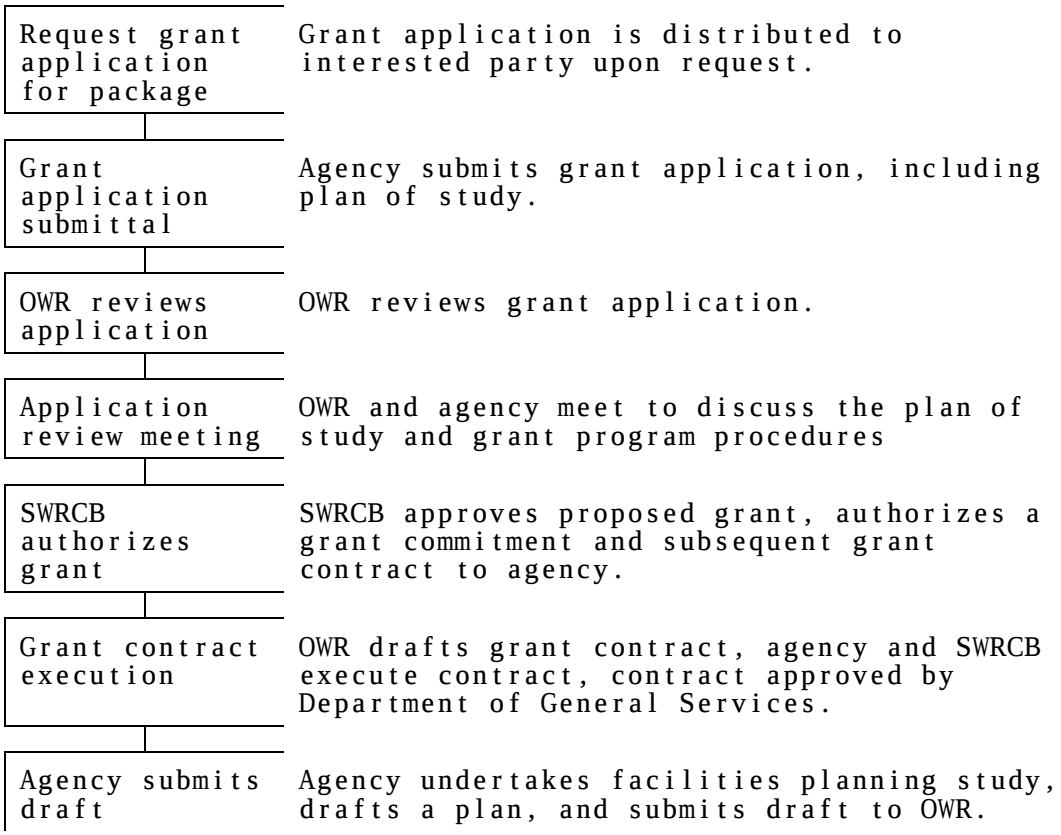
Each grant must result in a complete facilities planning report. The report will include an analysis of all of the essential components of potential operable projects. The plan will designate a potential recycled water service area and analyze the feasibility of serving all or portions of the designated study area. An agency may receive more than one grant. The OWR will not recommend approval of a grant application if the scope of the study is not sufficiently distinct from previous studies performed by an agency.

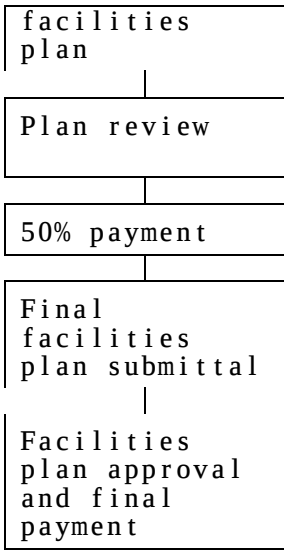
The SWRCB will establish a time limit in its resolution of grant approval for submitting a final facilities planning report. The allowable time will be the time estimated by the

agency in the grant application to prepare and submit a final facilities planning report. This limit will be the basis of the grant contract term. At any point during a grant an agency may submit one request for an extension of the grant term and an increase in costs accompanied by a justification. After review of the request, OWR may approve an extension of the grant contract of up to twelve months from the date specified in the SWRCB resolution or an increase in maximum grant by up to 50 percent from the amount authorized in the resolution. OWR staff shall bring to the SWRCB for approval 1) any increases in grant contract term or amount beyond these amounts or 2) additional requests for changes after the first one. After approval, a grant contract amendment will be processed, subject to approval, if necessary, by the Department of General Services.

D. Grant Process

The overall process of a FPGP grant is illustrated in the following flow chart.





E. Grant Application

The grant application will consist of an application form, a resolution by the agency authorizing the grant application, and a plan of study.

The plan of study should describe the nature and scope of the proposed facilities planning study. The following components should be included:

1. A description of the recycled water service area that will be investigated.
2. The sources of recycled water that will be investigated and a brief summary of the unit processes currently in use at existing treatment facilities.
3. A description of the current fate of the effluent that could be recycled.
4. A map of the study area showing the sources of recycled water and potential service area.
5. Identification of the water supply and wastewater agencies having jurisdictions over the sources of recycled water or the potential service area.
6. General description of water recycling and freshwater supply alternatives that will be evaluated.

7. A description of the opportunities for participation of the public, potential recycled water users, and other affected agencies in the study.

8. A schedule with the starting and completion dates of specific tasks associated with the facilities planning study.

9. A list of potential problems that could cause delays in the progress of the study and description of the means to reduce the impact of these potential problems.

10. Identification of the entities that will be conducting the study and description of their roles; description of proposed subcontracts with consultants or interagency agreements with other agencies, and any force account work.

11. Proposed budget for study, including estimated costs of specific tasks, sources of financing, sources of funds for cash flow until grant reimbursement.

After an initial review of the application, the OWR will schedule a meeting with the agency to discuss the plan of study and grant program procedures. Upon completion of application review by OWR, the application will be presented to the SWRCB with staff recommendation whether to approve and authorize execution of a grant contract.

F. Facilities Plan Review and Approval

The facilities planning study consists of facilities planning and associated environmental impact analysis. Where a recommended project has been identified, completion of the study for the purposes of the grant consists of submittal of the following items:

1. a final facilities planning report that fully documents all aspects of the study

2. a copy of a resolution certifying or adopting the environmental document as required under the California Environmental Quality Act.

Background information on facilities planning, monetary analyses, recycled water market assessment, and recycled water market assurances is found in Part One of these guidelines. Appendix C includes an outline of information that should be obtained or issues that should be addressed during facilities

planning. The information and analysis of issues are documented in the facilities planning report. The report must include an analysis of all of the essential components of potential operable projects. The level of detail should be commensurate with the size and complexity of the proposed project. While some factors listed in the outline may not be relevant to a particular project, all should at least be considered. If the conclusion of the study is a recommendation to proceed with implementation of a water recycling project, the agency should have completed initial work on assuring a recycled water market and drafted any necessary water recycling ordinances and/or interagency agreements.

During the course of planning, it may be concluded that a viable recycling project cannot be recommended. In this case, after consultation with the OWR and approval, the planning may be terminated before completion of all of the tasks specified in these guidelines. The results of the work completed and the basis for the conclusion should be documented in a report. After submittal of the report, the agency will receive grant funds for the work completed in the study and preparation of the report.

While it is appropriate to extract information from previous studies, the product submitted for a grant should not be an assemblage of copied material. Any extracted material should be revised and made consistent as needed prior to incorporation in a facilities planning report.

Environmental review should be consistent with requirements for obtaining SRF funding from the SWRCB. Guidance is provided in "Environmental Review Process Guidelines for State Loan and Small Community Grant Applicants."
An essential component of facilities planning is to identify the potential recycled water users that will participate in the recommended project. The agency should have determined how it will secure the recycled water market, generally through recycled water user contracts or use of a mandatory use ordinance. At the conclusion of facilities planning, the agency should either have obtained letters of intent to use recycled water from potential users or drafted a water recycling mandatory use ordinance and contacted all potential users regarding the project.

G. Funding Restrictions and Eligible Costs

An agency may conduct the facilities planning study by force account with its own resources or by contract with consulting firms or another public agency. Costs incurred either way are eligible insofar as they are for work within the scope of work

approved in the grant application. A billing code should be established by the agency to assign grant eligible costs. In general, force account eligible costs will be limited to direct costs, including labor overhead, chargeable to the planning study. More specific guidance is provided in WRLP "Guidelines on Force Account Eligible Costs." If the agency uses consulting services, the scope of work for the services should distinguish between grant-eligible and ineligible work and such work should be billed separately. It is recommended that the agency provide an opportunity for the OWR to review the consultant contracts prior to their execution to ensure that the scope of work separates grant-eligible tasks from other tasks for billing purposes.

Eligible costs are costs incurred after execution of the grant contract.

A grant will be provided to reimburse the agency for 50 percent of eligible costs up to a maximum grant of $75,000. The remaining 50 percent share of costs is the responsibility of the agency, but may include grants or loans from other entities, such as federal, state, or regional agencies. To prevent duplication of funding, the grant will be reduced if the agency receives more than 50 percent financial assistance from other sources.

H. Disbursement of Grant Funds

Grant funds will be provided in two disbursements. Disbursement of 50 percent of the total estimated grant will be made upon submittal of a draft facilities plan. A final disbursement will be made after approval by the OWR of the final facilities plan, including associated documents, such as the environmental impact analysis.

Requests for disbursement will be made on forms provided by the OWR. The requests must be accompanied by documentation, including a copy of consulting contracts, billings from consulting firms, and a monthly summary of agency staff hours and associated costs.

IV. LOAN FUNDING PROGRAMS

The Water Recycling Loan Program (WRLP) and the State Revolving Fund Loan Program (SRF) provide low interest loans to local agencies to design and construct water recycling projects. Water recycling loan applications are processed by the Office of Water Recycling (OWR) of the SWRCB. The purpose of the WRLP is to encourage the development of cost-effective water recycling projects by providing low interest loans to local agencies to lower the cost of reclaiming and reusing treated wastewater.

A. Program Funding Criteria

Generally, available funds will be committed to projects for which facilities planning is complete, provided the project meets the loan program requirements and is ready to proceed. However, the SWRCB reserves the right to manage the program to achieve the best use of loan funds. For example, the SWRCB may reserve funds for projects deserving special consideration or offer partial loans to achieve the maximum use of available loan funds.

Multiple-purpose projects may consist of components in more than one category. The components will be analyzed in accordance with the criteria of the applicable category and eligibility will be established accordingly.

Depending on the source of loan funds, there may be a cap on the total amount of a loan. The SWRCB establishes a cap on SRF loan funds annually based on the availability of SRF funds. There is a $10 million statutory cap per project for loans made from 1984 Bond Law funds. The SWRCB has established a $15 million cap per project for loans made from 1996 Bond Law funds.

B. General Eligibility

The general basis of eligibility of a water recycling project is established in the various bond laws and the SRF statutes, regulations, and policies. Projects for reclaiming ground water, including desalting and nitrate removal projects, are eligible under the WRLP (1996 Bond Law funds only) if the water to be treated has become unusable primarily because of human activities. Under the SRF, funding is restricted to projects reusing water of municipal wastewater origin. All projects must be cost-effective based on the project objective and the

available alternatives to achieve the objective.

While the loan terms for the WRLP and the SRF are essentially the same, such as interest rate, there are some important procedural and eligibility differences that can jeopardize funding under one program or the other if applicants are not alert to program requirements from the commencement of project planning through completion of construction. As an agency begins planning, it may not be possible for the SWRCB to assure the agency of which program might be available for funding for Category I and IV projects. In addition, because the SWRCB incorporated the Water Reclamation Account of the 1984 Bond Law into the SRF as a subaccount in order to secure additional federal matching funds, certain SRF requirements will apply to 1984 Bond Law loans. Therefore, all potential loan applicants for Category I, II, and IV projects should place their proposed projects on the SRF priority list and follow SRF environmental procedures.

It is the policy of the SWRCB that loans from the WRLP or the SRF shall be provided to cover 100 percent of eligible costs, excepting annual loan caps that may be established by the SWRCB. The agency may receive funds from other local, state, or federal programs to pay for ineligible costs or a share of eligible costs, provided that there is no duplication of funding of eligible components.

All applicants will be subject to the SWRCB "Environmental Review Process Guidelines for State Loan and Small Community Grant Applicants." The SWRCB cannot authorize a loan until the environmental review process is complete. The SWRCB must be notified immediately of any change in the project after completion of the environmental review process or after facilities plan approval (also called concept approval) by the SWRCB. Such changes may result in the need to revise environmental documents.

V. WATER RECYCLING LOAN PROGRAM PROCESS

The WRLP loan application process begins with the OWR staff distributing loan application packages to interested agencies upon request. The completed applications, including project planning documents, are submitted by the applicant for review. The OWR staff make a preliminary determination regarding the appropriate category assignment and which source of funds is most appropriate to fund the proposed project. After the OWR staff has determined that the loan application is complete, that is, that project planning is complete and all other application requirements have been met, that the project is ready to proceed, and that loan funds are available, staff will

issue facilities plan approval. The application will then be presented to the SWRCB for approval of a preliminary loan commitment and subsequent loan contract. If loan funds are not currently available, consideration may be given to reserving future repayments returning to one of the revolving funds.

If OWR determines that a proposed project is not cost-effective, OWR will provide a written explanation to the agency. Upon request by the agency, the OWR will bring the proposed project before the SWRCB with the explanation of the decision of OWR and the agency's request for review and authorization for facilities plan approval.

The preliminary loan commitment will expire at the end of the time period specified in the SWRCB resolution approving the loan commitment. The end of the period will be 8 weeks after the applicant's scheduled date for submittal to the state of final plans and specifications to account for time for the Division of Clean Water Programs (Division) to review plans and specifications. If biddable plans and specifications are not received and approved by the expiration date of the preliminary loan commitment, the OWR may approve up to a 90 day extension for a good cause.

The procedures and administration of the SRF differ somewhat from the WRLP. Refer to the "Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities" (SRF Policy) for projects funded under the SRF. **The procedures described below apply to the WRLP.**

Submittal of preliminary design plans for review by the OWR is encouraged, but not required. Once the project design is completed, OWR reviews and approves the plans and specifications, final market assurances, construction financing plan, and revenue program. An approval to advertise is then issued to the applicant, and a loan contract is drafted. When the applicant has awarded the construction contract, the loan contract is executed and loan disbursements may commence. Loan repayments from the applicant to the SWRCB must begin within two years after the date of the loan contract. The entire application process is summarized below.

Request for application package	Application is distributed to interested party upon request.
Facilities planning and	Agency does planning without financial assistance from the Loan Program. OWR staff

environmental compliance by applicant	is available for meetings and guidance. Agency must comply with environmental review, water rights, State Health Department, and other requirements.
Application completed	Agency submits completed application, authorizing resolution, and planning documents to SWRCB.
SWRCB review	OWR staff reviews and comments on the application and planning documents. Agency prepares responses, if necessary.
Project facilities plan approval and eligibility determination	OWR staff issues project facilities plan approval, makes preliminary eligibility determination and determines availability of loan funds.
SWRCB authorizes loan	SWRCB approves the proposed project, authorizes a loan commitment and subsequent loan contract to the agency.
Design submittals	Agency submits 100% design submittal, including cost estimate, construction financing plan, revenue program, final market assurances, and plan for the use of remaining project capacity.
Design review and approval to advertise	OWR staff reviews and comments on the design submittal; Agency prepares responses, if necessary. Staff makes final eligibility determinations, issues approval to advertise the construction contract, and drafts a loan contract.
Construction contract award	Agency awards construction contract and submits related information to OWR.
Loan contract issued	SWRCB and agency execute loan contract.
Loan disburse-	Agency requests loan disbursements. SWRCB

ments to agency	issues loan disbursements to agency.
Construction monitoring	Staff monitors status of construction and of users converting to recycled water use, reviews final revenue program. Agency submits financial report and final project summary after completion of construction.
Loan repayments to SWRCB	Agency begins loan repayments within two years after date of loan contract.
Annual Reports	Agency submits reports annually for the specified period (See Section XIV).

VI. STATE REVOLVING FUND PROCESS

The procedures and administration of the SRF are described in the SRF Policy. Category II recycling projects are administered under the SRF Policy only. In addition to the SRF Policy, the Water Recycling Funding Guidelines are applicable to the Category I and IV water recycling projects funded under the SRF. A copy of the SRF Policy may be obtained by request (refer to Appendix E).

VII. PLANNING REVIEW CRITERIA

In order for a project to be approved for a loan, a project must be cost-effective. A water recycling project will be considered cost-effective when, compared with the development of other alternatives to achieve the project objective, the proposed project will result in the minimum total resources costs over time to meet project objectives. Resource costs to be evaluated include monetary costs as well as nonmonetary factors, including social and environmental effects. An economic analysis, which considers all monetary costs associated with each alternative, is given primary consideration unless other factors are overriding. Other important factors include an assessment of the recycled water market, availability of recycled water, financial feasibility, energy consumption, and engineering.

VIII. FACILITIES PLANNING

OWR staff will not consider a loan application for funding until the facilities planning process has been completed. Agencies are encouraged to notify OWR staff of their interest in applying for a loan early in the planning process. OWR staff can then advise agencies about the availability of funding and assist agencies in developing facilities planning documents that comply with funding guidelines and preparing loan applications. The facilities planning concepts discussed in Part One will be applicable. If the loan application and supporting documents are incomplete, the applicant will be advised about what additional information is necessary. Funds are available to assist in facilities planning either through the FPGP or an allowance under the SRF. No planning cost allowance is available under the WRLP.

IX. MINIMUM USE REQUIREMENTS

Existing users are expected to begin use in the first year of operation unless phasing of these users is justified. Projects are expected to reach certain minimum usage levels during the operating life of the project. These minimum levels are based on the eligible project capacity determined in accordance with Section XI.A.6. These minimum usage levels are explained below.

A. At least 50 percent of the total eligible project capacity must serve users that will exist by the time of completion of construction. (See Appendix A for definition of “existing user”.)

B. Generally, all existing water users proposed to be included in the eligible project capacity will be expected to be connected to the system upon initial project operation. Proposals to connect existing users after initial project operation must be approved in the facilities plan approval based on the market assurances explained in Section X.C.

C. During the first year of project operation, the agency will be expected to use at least 25 percent of the eligible project capacity. The agency will also be expected to reach use of the total project capacity in accordance with the schedule of project usage approved in the facilities plan approval.

X. RECLAIMED WATER MARKET ASSURANCES

Documentation is required to provide an assurance of participation of users in the project. Existing users must be covered by a mandatory use ordinance or user contract. Documentation must be provided if phasing of project usage is proposed. These provisions are explained below.

A. Mandatory Use Ordinances

A mandatory use ordinance is a law adopted by a retail water purveyor requiring the use of recycled water in place of another source of water. For the ordinance to be an acceptable form of market assurance, it shall contain certain provisions:

1. Specification of the types of use of water for which recycled water must be used.

2. Specification of the conditions under which recycled water must be used or new development must be plumbed for future recycled water use.

3. Procedure for determining which water users are required to either convert to recycled water service or be plumbed to accept recycled water upon new water service.

4. Procedure to provide notice to potential users that they are subject to the ordinance and specification that the notice include information about the project, the responsibilities of the users under the ordinance, the price of the recycled water, and description of the on-site retrofit facilities requirements.

5. Procedure for request by the users for a waiver.

6. A penalty for noncompliance with the ordinance. Acceptable penalties are discontinuance of freshwater service, a freshwater rate surcharge of at least 50 percent of the freshwater rate, or an equally effective penalty.

If the agency implementing the recycled water project does not

have the legal authority to enforce a mandatory use ordinance (for example, a sewerage agency), the mandatory use ordinance may be implemented by the retail water purveyor.

The OWR staff will review a copy of the adopted ordinance along with the loan application. Facilities plan approval of the project will establish the eligible capacity of the project based on the market assessment.

The SWRCB's resolution approving a loan commitment will include a requirement that the local public agency submit either 1) copies of letters of intent to participate in the project or 2) copies of the notifications to the users subject to the ordinance, a statement of whether any notified users appealed the conditions of recycled water use, and documentation showing the disposition of any appeals. The resolution will require that these items be submitted to the OWR staff before approval to advertise for construction, but in no case later than six months from the date of the resolution. The OWR staff will have 60 days from the date of receipt of submittals to approve or reject them, otherwise the submittals will be considered adequate. The SWRCB's resolution will include a provision that if the agency does not submit these items within six months or if the submittal is considered inadequate by the OWR staff, the resolution is null and void, and the project will need to be resubmitted for approval. Submittal of copies of letters of intent or notifications of users may be waived by OWR for users that have their sites already plumbed and metered for use of recycled water, but are temporarily using potable water. Considerations for a waiver will include, but not be limited to, the number of years of successful recycling experience of the agency and the type of water use.

There may be limitations on the application of mandatory use ordinances. Certain potential users may not be subject to the ordinance for various reasons, for example, a user may not be obtaining water service from the agency with the ordinance or the user may be outside of the service area of the agency. In such situations, user contracts may be expected to cover users intending to take recycled water during the first year of operation. The ordinance shall apply to sufficient users such that in aggregate they represent most of the recycled water deliveries for water users that will exist by the time of completion of construction.

B. User Contracts

A user contract is a binding agreement between recycled water purveyors and users, signed by both parties. For the OWR staff to accept a user contract as an acceptable form of market

assurance the contract must contain certain provisions:

1. A commitment to use the recycled water for a minimum period of 10 years.

2. The amount of recycled water the user intends to take annually.

3. The sites and the types of use of the recycled water.

4. Specification of the conditions of recycled water use, including the water quality.

5. The price of the recycled water.

6. Description of the regulatory and water purveyor requirements for on-site retrofit facilities needed to convert from freshwater to recycled water.

7. Date when recycled water use will commence.

User contracts are required from sufficient users such that in aggregate they represent most of the recycled water deliveries for water users that will exist by the time of completion of construction. The agency must submit with the loan application letters of intent from the proposed recycled water users intended to execute user contracts. The content of the letters should follow the model format provided by the Office of Water Recycling. The user contracts shall be submitted before OWR approval to advertise for construction.

C. Documentation of Future Connections

If the agency proposes to connect users after initial project operation, market assurances should include a description and schedule of the future connection of users to the eligible project facilities. Anticipated delay in connection of existing users after initial project operation should be supported by adequate reasons for the delay in connection and a firm schedule for the construction of facilities to make the connections. The plan for use of the full eligible project capacity or pipeline capacities should be submitted with the loan application and updated, if necessary, with the submittal of final plans and specifications. An approved schedule of deliveries to reach the eligible project capacity will be included in the facilities plan approval.

XI. ELIGIBILITY CRITERIA

The following eligibility policies have been established by the SWRCB regarding costs and types of projects eligible and ineligible for loans.

A. Eligible Costs

1. Costs of construction for water recycling treatment, storage, and distribution systems shall be eligible for loans.

2. Allowances:

   a. WRLP: The eligible cost may include an allowance, if requested by the loan recipient, to cover engineering, legal and administrative services associated with the design and construction of the eligible recycling project. The amount of such allowance shall be up to 15 percent of the eligible cost of construction.

      In addition, the eligible cost may include an allowance, if requested by the loan recipient, to cover design services only for design costs of future phased expansions of facilities on the same site as facilities to be constructed as part of the loan. The phased expansions may include a capacity for up to 20 years after completion of construction. The amount of the allowance shall be up to 10 percent of the engineer's estimate of the construction cost of expansions based on 100 percent design.

   b. SRF: The eligible cost may include allowances for facilities planning, design, construction management, administration, and prime engineering. The SRF Policy should be consulted for details.

3. Project facilities which are eligible must remain in public ownership and have provision for adequate operation and maintenance and adequate right-of-way.

4. Reclaimed water distribution systems from the source of supply to the property line of the reuse sites shall be eligible for a loan. Eligibility of a system on the property of the user should be limited to:

   - Reclaimed water service line up to and including the water meter if the meter is located in the proximity of the property line.

   - Reclaimed water service line up to a main storage facilities serving the user on the reuse site or, if

there are more than one use areas that are widely separated on the property, up to the point of initially dividing the water flow.

5. A recycled water distribution pipeline shall be eligible if the terminal point serves a user that is committed by mandatory use ordinance or by user contract to take recycled water during the initial operation of the project. If only a portion of a pipeline serves users secured by a firm commitment, then eligibility shall extend to the most downstream user secured by a firm commitment.

6. The capacity of a project eligible for a loan shall be that capacity which can be used within nine years of completion of construction. However, pump station wet wells and buried pipelines at the treatment facility or in the distribution system shall have an eligible capacity of up to twenty years when documented by a market assessment showing the twenty year service area and identifying and analytically projecting all existing and future uses to be served by the recycled water pipeline proposed for loan funding. These eligible capacities are measured in terms of annual recycled water deliveries. Eligible sizes of facilities components are based on reasonable design criteria, including peaking factors, to serve these annual deliveries. There shall not be any restriction on the capacity of a project. Capacity in excess of the eligible project shall be funded with funds other than the SWRCB loan. Eligible costs for partially eligible capacity will be determined on an incremental cost rather than pro rata cost basis.

7. Agencies constructing pipelines or treatment facility capacity in excess of that which can be utilized within five years of completion of construction must demonstrate that adequate reclaimable water supplies will be available to support that future capacity. This documentation may take the form of: 1) an urban water management plan or equivalent water supply planning document which specifically identifies measures intended to assure that, in a year of normal supply and demand, an adequate supply of water will be available to support the projected growth in wastewater flows or, 2) certification by the agency that existing tributary wastewater flows will meet or exceed the capacity of the proposed recycling project at the time of the completion of the project.

8. Reasonable costs to provide an emergency backup water supply for the recycled water system are eligible.

B. Ineligible Costs

1. The following costs are not eligible for WRLP loan funds:

   - costs of planning for a project
   - costs of applying for a loan
   - costs of land, easements, and rights of way
   - costs for operation and maintenance of project facilities
   - legal and court costs resulting from violation of state and federal laws, excluding the cost of capital facilities required to be built as a condition or result of a legal or court settlement.

2. Eligible costs of construction performed by the loan recipient's work force shall not include indirect costs, that is, expenses not readily identifiable with the eligible recycling project, such as ordinary operating expenses of the loan recipient. A more detailed discussion may be found in "Water Reclamation Loan Program Guidelines on Force Account Eligible Costs."

C. Miscellaneous

1. Multiple-purpose projects shall be eligible in proportion to the costs allocated to water recycling. In addition, projects utilizing supplemental sources of water are eligible in proportion to the costs allocated to the recycled water. An example of a multiple-purpose project would be a ground water recharge project that percolates both storm water runoff and treated wastewater. For projects using multiple sources of water, costs will be allocated to each source on a pro rata basis.

2. Projects for reclaiming ground water, including desalting and nitrate removal projects, are eligible under the WRLP (1996 Bond Law funds only) if the water to be treated has become unusable primarily because of human activities. This includes municipal, industrial, or agricultural activities. The degraded source water may be provided to the project directly, such as from a wastewater treatment plant, or indirectly, such as pumping from a brackish or polluted ground water basin. Projects for desalting naturally occurring saline or brackish waters are not eligible for a loan.
3. Recycling of industrial wastewater is eligible for a loan provided the loan applicant is a municipality, public agency, or a local public agency, depending on the source of loan funds, as defined in Appendix A. In-plant recycling projects are not eligible for a loan.

4. Project changes are permitted after approval of the project

by the SWRCB, provided that there is no change in the scope of the project. If there is a change in scope of a project, the OWR staff shall bring the project to the SWRCB for reapproval. The scope of a project is considered to have changed if there is any of the following:

a. A decrease in the recycled water deliveries projected for the ninth year following completion of construction by more than 15 percent.

b. A change required in the environmental documents prepared under the California Environmental Quality Act such that the SWRCB is required to reconsider the environmental documents.

c. An increase in the total economic cost of the project such that the cost exceeds the alternative benchmark, such as the freshwater cost, by more than 15 percent.

d. An increase in the total eligible project cost such that it exceeds the preliminary loan commitment amount by more than 50 percent.

e. An adverse effect on the engineering or financial feasibility of the project.

The SWRCB Project Manager shall be promptly informed of project changes during construction. Because changes may affect project eligibility or require reapproval by the SWRCB, substantial changes during construction should be approved before initiating the change.

The maximum loan amount will be based on bid amount at the time of award of the construction contract, as described in Section XII. All project changes during construction that result in cost increases above the maximum loan amount shall be the responsibility of the loan recipient. Changes during construction may result in decreases in eligible costs. Such decreases may offset cost increases for eligible project costs. Eligible cost increases may result from 1) overruns in quantities beyond estimates in original bids for eligible work specified at the time of bid or 2) change orders for changed work which has been approved for eligibility. The final loan amount will be adjusted downward for any decreases in eligible cost items less any eligible offsetting cost increases, up to the maximum loan amount. Change orders will be reviewed for eligibility only if there is a request from the loan recipient and there is an offsetting cost decrease.

5. Retroactive funding of construction is not eligible for loan funds under the WRLP, with the exception that eligibility may be reserved for advance construction of minor portions of a proposed project with prior approval by OWR staff. Advance construction is not eligible for any facilities commencing construction before submittal of the loan application. Advance construction shall be justified based on the cost savings or time coordination with the main portion of the project. Prior approval does not constitute an assurance of final eligibility. Such eligibility is determined at the time of plans and specifications approval of the main project. The SRF Policy should be consulted for the retroactive funding policy under the SRF.

XII. LOAN FINANCIAL PROVISIONS

The provisions for the disbursement and repayment of loan funds under the SRF are discussed in the SRF Policy. The following discussion on loan provisions applies only to the WRLP. Successful loan applicants will receive loan funds during project construction based on evidence of satisfactory construction progress. No loan funds will be advanced during design. Interest charges on loan funds begin to accrue as soon as loan funds are disbursed. The maximum loan amount will be based on bid amount at the time of award of the construction contract. An allowance for design costs and engineering, legal, and administrative costs may be included. Increases in the loan amount will not be permitted due to changes in cost during construction. The standard loan provisions will provide for equal annual repayments for a 20-year term following the date of the loan contract. However, shorter repayment periods are encouraged and may be imposed. The repayment will consist of principal and interest. The initial repayment shall be made not later than two years after the date of the loan contract. Additional details regarding the financial aspects, as well as general contractual requirements, can be found in Appendix D and in the model loan contract, which can be obtained upon request (refer to Appendix E).

XIII. DESIGN AND CONSTRUCTION

Before a project can receive approval to advertise the construction contract under the WRLP or plans and specifications approval under the SRF, Division staff must ensure that:

1. The design is consistent with the project described in the facilities plan approval;

2. The construction contract documents comply with all state and, if applicable, federal administrative requirements and contain provisions specified in the loan contract;

3. Agency has the required market assurances; and

4. All other state and facilities plan approval conditions have been met.

The procedures applicable to design, plans and specifications review, and approval to award construction for the SRF are described in the SRF Policy. The following discussion applies only to the WRLP. Staff must review final plans and specifications and other documents before issuing approval to advertise. The final design submittal consists of the following: 1) complete, biddable, and signed plans and specifications; 2) a detailed, itemized engineer's cost estimate; 3) updated revenue program; 4) updated construction financing plan and; 5) recycled water market assurances.

Promptly upon award of the construction contract or contracts, the agency shall notify the SWRCB Project Manager of the award. The notice shall be accompanied by a tabulation of bids received, the most recent engineer's estimate of project cost, a copy of the lowest acceptable bid proposal, a description of any bid protest received together with a description of how the protest was resolved, a copy of any project changes or addenda issued since approval to advertise was given, and a copy of the signed construction subcontract. If the agency awarded to anyone other than the apparent low bidder, the reasons for not awarding to the apparent low bidder shall be provided.

XIV. OPERATION

Agencies are encouraged to adopt a recycled water ordinance or regulation to ensure the long term successful operation of a recycling project in compliance with health, safety, and water quality requirements. A recycled water ordinance can include conditions under which users accept recycled water and define the requirements for on-site facilities design, construction, operation, monitoring and inspection, connection fees and service charges, enforcement, and penalties. An ordinance can ensure that certain design criteria and standards incorporated into the original project can be carried on in project expansion as new users are added.

Agencies are also encouraged to prepare a recycled water user manual. The manual is used by personnel employed by users of

recycled water who handle recycled water on a daily basis, such as park maintenance staff. The manual, usually a two to ten page guide, would cover in simplified language such topics as irrigation scheduling, precautionary measures, emergency procedures, control of runoff, and routine maintenance. It can also include a simplified description of the treatment that recycled water receives before reuse and the overall recycled water system.

Once the project begins operation, the project will be monitored for progress in connecting recycled water users and delivering recycled water. Annual reports must be submitted by the loan recipient until at least one full year after all proposed users are connected up to a maximum of nine years.

APPENDICES

A. DEFINITIONS

B. LIST OF ABBREVIATIONS

C. FACILITIES PLANNING REPORT OUTLINE

D. LOAN REPAYMENT AND FINANCIAL ANALYSES

E. ORDER FORM FOR ADDITIONAL INFORMATION

APPENDIX A

DEFINITIONS

Award of Construction Contract: The formal approval of selection of a construction contractor by the governing board of the agency.

Completion of Construction: The date, as determined by the Division of Clean Water Programs after consultation with the loan recipient, that the construction of the project is substantially complete.

Construction Financing Plan: The demonstration of the financial capability to design and construct a project.

Cost-Effectiveness Analysis: An analysis to determine which project alternative will result in the minimum total resources cost (opportunity cost) over time to meet the project objectives, including local, state and federal requirements.

Economic Analysis: The procedure to determine the total monetary costs and benefits of all the resources committed to a project regardless of who in the society contributes them or who in the society receives the benefits.

Eligible Water Recycling Project: A water recycling project that is cost-effective based on the project objective when compared to the appropriate alternatives to achieve the objective. The project shall comply with applicable water quality standards, policies, and plans.

Existing user: An entity that currently exists or will exist before the completion of project construction and is using or would be expected to use fresh water if recycled water were not made available.

Financial Analysis: The procedure to determine financial feasibility through the determination of expenditures and incomes of or other financial impacts on the agency implementing the project, recycled water users, or others affected by the project.

Future user: An entity that currently does not exist and will not exist before the completion of project construction.

Local Public Agency: Any city, county, district, joint powers authority, or any other local public body or political subdivision of the state created by or pursuant to state law

and involved with water or wastewater management (based on 1988 Bond Law). State agencies are not included in this term.

Municipality: Municipality shall have the same meaning as in the federal Clean Water Act (33 U.S.C. Sec. 1251 et. seq.) and shall also include the state or any agency, department, or political subdivision thereof (based on 1984 Bond Law).

Planning Period: The period over which a water development project is evaluated for cost-effectiveness. This period is not necessarily the same as the useful lives of the facilities under consideration. The planning period begins with the system's initial operations and is defined to be 20 years for the Water Recycling Loan Program.

Preliminary Grant Commitment or Preliminary Loan Commitment: A formal action by the SWRCB approving and reserving funds for a study or project.

Public Agency: Public agency shall have the same meaning as municipality.

Recycled Water: Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. (This term is synonymous with “reclaimed water”.) (Based on California Water Code, Section 13050(n).)

Revenue Program: The demonstration of the financial feasibility of a project for the period after operation has begun.

Water Recycling: The process of treating wastewater to produce water for beneficial use, the storage and distribution of recycled water to the place of use, and the actual use of recycled water.

APPENDIX B

LIST OF ABBREVIATIONS

CEQA	California Environmental Quality Act
Division	Division of Clean Water Programs
FPGP	Water Recycling Facilities Planning Grant Program
OWR	Office of Water Recycling
RWQCB	Regional Water Quality Control Board
SRF	State Revolving Fund Loan Program
SRF Policy	"Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities"
SWRCB	California State Water Resources Control Board
WRLP	Water Recycling Loan Program
1984 Bond Law	Clean Water Bond Law of 1984 (Proposition 25 on the November 6, 1984 ballot)
1988 Bond Law	Clean Water and Water Reclamation Bond Law of 1988 (Proposition 83 on the November 8, 1988 ballot)
1996 Bond Law	Safe, Clean, Reliable Water Supply Act (Proposition 204 on the November 5, 1996 ballot)

APPENDIX C

RECOMMENDED PLANNING OUTLINE FOR WATER RECYCLING PROJECTS

This outline contains the components of a facilities planning report for water recycling. The facilities planning report outline emphasizes the information relevant to water recycling and its application for water supply purposes. For water pollution control facilities plans, additional information would be required to define the water quality problem and planning constraints and analyze the appropriate pollution control alternatives in addition to water recycling.

Facilities Plan/Project Report

A. Maps and diagrams

1. Vicinity Map.
2. Detailed map of study area boundaries.
3. Topographic map.
4. City boundaries.
5. Wholesale and retail water supply entity boundaries within study area and adjacent to study area.
6. Wastewater agency boundaries within and adjacent to study area.
7. Existing recycled water distribution pipelines, storage, and customers.
8. Ground water basin boundaries, major streams, streams receiving waste discharges.
9. Present and projected land use.
10. Each recycled water facilities alternative (including recommended project), showing locations of potential customers and approximate pipeline routes.
11. Wastewater treatment schematic--existing and proposed.

B. Study Area Characteristics

1. Hydrologic features.

2. Ground water basins, including quantities extracted by all users, natural and artificial recharge, losses by evapotranspiration, inflow and outflow of basins, and safe yield or overdraft.

3. Water quality--ground water and surface water.

4. Land use and land use trends.

5. Population projections of study area.

6. Beneficial uses of receiving waters and degree of use, portion of flow that is effluent.

C. Water Supply Characteristics and Facilities

1. Description of all wholesale and retail entities.

2. All sources of water for study area and major facilities, their costs, (costs should be broken down into fixed and variable), subsidies, and customer prices.

3. Capacities of present facilities, existing flows, estimated years when capacities to be reached for major components (water treatment plants, major transmission and storage facilities).

4. Ground water management and recharge, overdraft problems.

5. Water use trends and future demands, prices and costs.

6. Quality of water supplies.

7. Sources for additional water and plans for new facilities (for both the local entity and the wholesalers).

D. Wastewater Characteristics and Facilities

1. Description of entities.

2. Description of major facilities, including capacities, present flows, plans for new facilities, description of treatment processes, design criteria.

3. Water Quality of effluent and any seasonal variation.

4. Additional facilities needed to comply with waste discharge requirements.

5. Sources of industrial or other problem constituents and control measures.

6. Existing recycling, including users, quantities, contractual and pricing arrangements.
7. Existing rights to use of treated effluent after discharge.

8. Wastewater flow variations--hourly and seasonal.

E. Treatment Requirements for Discharge and Reuse

1. Required water qualities for potential uses.

2. Required health-related water qualities or treatment requirements for potential uses, operational and on-site requirements (such as backflow prevention, buffer zones).

3. Wastewater discharge requirements, anticipated changes in requirements.

4. Water quality-related requirements of the RWQCB to protect surface or ground water from problems resulting from recycled water use.

F. Recycled Water Market

1. Description of market assessment procedures.

2. Descriptions of all users or categories of potential users, including type of use, expected annual recycled water use, peak use, estimated internal capital investment required (on-site conversion costs), needed water cost savings, desire to use recycled water, date of possible initial use of recycled water, present and future source of water and quantity of use, quality and reliability needs, and wastewater disposal methods.

3. Summary tables of potential users and related data.

4. Definition of logical service area based on results

of market assessment.

G. Project Alternative Analysis

1. Planning and design assumptions:
   a. Delivery and system pressure criteria.
   b. Peak delivery criteria.
   c. Storage criteria.
   d. Cost basis: cost index, discount rate, useful lives, etc.
   e. Planning period.

2. Water Recycling Alternatives to be Evaluated
   a. Treatment alternatives:
      i. Alternative levels of treatment.
      ii. Alternative unit processes to achieve a given level of treatment.
   b. Pipeline route alternatives.
   c. Alternative markets:
      i. Based on different levels of treatment.
      ii. Geographical areas.
   d. Alternative storage locations.
   e. Subalternatives of selected alternative:
      i. Marginal analysis for selected alternative for certain categories of users or certain geographic areas.
      ii. Varying storage, pump rates, and pipeline diameters.
      iii. Use of fresh water blending during peak irrigation months.

3. Non-recycled water alternatives.
   a. Discussion of other potentially viable new sources of water.
   b. Provide economic costs.

4. Water conservation/reduction analysis.
   a. Analysis.
   b. Impact on recycling, if any.
   c. Recommendation.
   d. Implementation.

5. Pollution control alternatives (if applicable) needed to comply with waste discharge requirements, and possible allocation of costs between recycling and pollution control.

6. No project alternative.

7. Information supplied for each alternative to

include, but not be limited to:

a. Cost tables for each alternative with breakdown of costs by total capital (without grants), O&M, unit processes, and with equivalent annual cost and per acre-foot cost.
b. Lists of potential users assumed for each alternative.
c. Economic analysis.
d Energy analysis for each alternative, including direct and construction energy.
e. Water quality impacts:
    i. Effect on receiving water by removing or reducing discharge of effluent, including effect on beneficial uses resulting from reduced flow.
    ii. Ground water impacts.

8. Comparison of above alternatives and recommendation of specific alternative.

H. Recommended Plan

1. Description of all proposed facilities and basis for selection.

2. Preliminary design criteria and refined pipeline routes.
3. Cost estimate based on time of construction.

4. List of all potential users, quantity of recycled water use, peak demand, commitments obtained.

5. Reliability of facilities as compared to user requirements.

6. Implementation plan:
    a. Coordination with water suppliers, determination of recycled water supplier and needed agreements or ordinances.
    b. Ability and timing of users to join system and make on-site investments.
    c. Tentative water recycling requirements of RWQCB.
    d. Commitments from potential users.
    e. Water rights impact.
    f. Permits, right-of-way, design, construction.
    g. Detailed schedule.

7. Operational plan--responsible people, equipment, monitoring, irrigation scheduling, etc.

I. Construction Financing Plan and Revenue Program

1. Sources and timing of funds for design and construction.

2. Pricing policy for recycled water.

3. Costs which can be allocated to water pollution control.

4. Annual projection of:

   a. Fresh water prices for each user or category of users.
   b. Recycled water used by each user.
   c. Annual costs (required revenue) of recycling project.
   d. Allocation of costs to users.
   e. Unit costs to serve each user or category of users.
   f. Unit price of recycled water for each user or category of users.
   g. Sensitivity analysis assuming portion of potential users fail to use recycled water.

5. Sunk costs and indebtedness.

J. Appendices

1. Tables of all abbreviations.

2. Copies of letters of interest or intent from recycled water users, or other documentation of support from potential users.

3. Draft of recycled water mandatory use ordinance or model user contract.

4. Drafts of necessary agreements, such as wholesale-retail agreement, joint powers agreement, etc.

APPENDIX D

LOAN REPAYMENT AND FINANCIAL ANALYSES

I. Introduction

Typically, money is an essential ingredient for a feasible water recycling project. It must be raised to finance design and construction, to provide positive cash flow during construction, and, once operation has commenced, to repay debts and pay for operation and maintenance. These guidelines contain the repayment provisions for loans from the Water Recycling Loan Program and the desired documentation to demonstrate financial feasibility. More detailed information on financial analyses can be found in the SWRCB's Interim Guidelines for Economic and Financial Analyses of Water Reclamation Projects.

Two financial reports are required: a construction financing plan and a revenue program, which covers the period commencing with initial facilities operation. These two reports must be submitted with the loan application (as part of the facilities plan) and updated and submitted with the 100 percent design submittal. A final revenue program must be submitted at completion of construction.

II. Loan Repayment Provisions

Loans from the Water Recycling Loan Program will have an interest rate set at 50 percent of the average interest rate paid by the State on the most recent sale of general obligation bonds. The term of the loans may be for a period of up to 20 years. The loan term begins from the loan contract date. Repayments will begin on the last day of the month following two years after award of the prime construction contract.

III. Construction Financing Plan

It must be demonstrated that there are sufficient financial resources to finance the design and construction of the project. The construction financing plan generally consists of at least the following items:

1. An up-to-date capital cost estimate, including construction, engineering, legal, and administrative costs with a reasonable allowance for contingencies.

2. A cash flow analysis consisting of a monthly forecast of

expenses during design and construction and sources of funds to meet those expenses.

3. The sources and amounts of funds for capital costs, including the status and timing in securing those funds.

There will be no disbursements of loan funds from the Water Recycling Loan Program until the award of construction contracts. Thus, the loan recipient must carry design costs until the initiation of construction. Loan disbursements will be made during construction in proportion to eligible costs incurred. If there are multiple construction contracts, the loan disbursements will be proportioned amongst each construction contract.

The cash flow analyses should be based on the above procedures for loan disbursements and the assumption that receipt of loan funds will take 60 days from date of request.

IV. Pricing Policy

There are a variety of potential methods for determining the price customers will pay for recycled water. The most typical include:

1. The recycled water price is set to match exactly production costs.

2. The recycled water price is set at a given percentage discount from whatever potable water prices are.

3. The recycled water price is set at a given dollar discount from whatever potable prices are.

Some agencies charge a meter charge or have multiple rates if they have both wholesale and retail sales.

Some of the considerations involved in establishing recycled water rates are:

1. The costs that are expected to be recovered by recycled water revenue.

2. The costs and inconvenience to recycled water customers resulting from switching part of their water use to recycled water.

3. Whether the water agency will pay for on-site conversion costs of recycled water customers.

4. The degree of integration of the recycled water supply into the water agency's overall sources of supply, and thus the integration of costs and revenue from the various sources of supply.

Within the limits of financial feasibility, it is the recommendation of the Office of Water Recycling that the price of recycled water be as high as reasonable, taking into consideration the value of recycled water as compared to the price of fresh water. A reasonable discount from fresh water prices is often the most equitable.

V. Revenue Program

The financial feasibility of a project once it has started operation is shown in a revenue program. In general, a period of 10 years should be forecast. The following items should generally be included for each year:

1. recycled water demand by each user

2. fresh water prices applicable to the recycled water users

3. recycled water prices

4. total recycled water revenue

5. debt repayment

6. operation and maintenance costs, broken down by category with fixed and variable costs separated

7. supplementary funds provided to accommodate any revenue deficiency

8. sensitivity analysis assuming portion of potential users fail to use recycled water.

The assumptions and bases for all numbers should be fully stated and referenced. The pricing policy for the recycled water should be explained. It may be necessary to allocate project costs between pollution control and water supply or between categories of users.

Water supply agencies frequently have more than one source of water. The finances for these various sources are usually integrated, and customers are charged a common melded price, even if they receive water from only one of the sources. Likewise, recycled water should not be viewed as an alien source of water, but rather as simply an added supply to meet

the overall water demands of a water supply agency. Its only distinction is that its quality restricts its uses. As such, it is desirable that the finances for a recycled water system be integrated with those for the fresh water sources of supply. Once it has been determined that recycled water costs are justifiable compared to other sources of supply, the recycled water supply should not be treated as an independent system financially.

With recycled water viewed as a complement to a water system, Recycled water prices should be established using the same standards as fresh water, taking into consideration some of the peculiarities mentioned in the previous section. If revenues from recycled water are insufficient to cover all expenses from the recycled water system, as is common in the initial years of operation, the shortfall can be made up with revenue from the fresh water system. Likewise, excess recycled water revenues can be used to cover other agency expenses, allowing all customers to benefit.

Because recycled water is serving as a replacement for fresh water, there inevitably is an effect on fresh water costs and revenue. It is desirable to quantify these effects and include them in the revenue program to describe fully the costs and benefits derived from the recycled water. This is often useful to provide justification for using fresh water revenue to help pay for a recycled water system.

APPENDIX E

ORDER FORM FOR ADDITIONAL INFORMATION

Please review the below list of additional documents relating to the Water Recycling Loan Program. If you wish to obtain any of the documents, please provide the requested information.

A. Check the items desired:

[ ] 1. Clean Water Bond Law of 1984
[ ] 2. Clean Water and Water Reclamation Bond Law of 1988
[ ] 3. Safe, Clean, Reliable Water Supply Act (1996 Bond Law)
[ ] 4. Sample Letter of Intent for Use of Reclaimed Water
[ ] 5. Desirable Provisions of Reclaimed Water User Contracts
[ ] 6. Model Recycling Loan Contract
[ ] 7. Interim Guidelines for Economic and Financial Analyses of Water Reclamation Projects
[ ] 8. Background Information on Economic Analyses of Reclamation Projects
[ ] 9. Loan Application Package (Application Form, Water Recycling Funding Guidelines, and Environmental Review Process Guidelines for State Loan and Small Community Grant Applicants
[ ] 10. Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities

B. Provide the mailing address:

NAME: _____

TITLE: _____

AGENCY: _____

MAILING ADDRESS: _____

CITY, STATE, ZIP CODE: _____

C. Fold this order form in half, affix postage, and mail to pre-printed address on reverse side.

Place

Stamp

Here

Office of Water Recycling
Division of Clean Water Programs
State Water Resources Control Board
P. O. Box 944212
Sacramento, CA 94244-2120

WATER RECYCLING FUNDING GUIDELINES, April 17, 1997
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